

App. Serial No. 10/562,075
Docket No.: DE 030213 US1

In the Claims:

Please amend claims 1 and 2 and enter new claims 3-4 as indicated below.

This listing of claims replaces all prior versions.

1. *(Currently amended)* A method for the self-testing of a reference voltage in electronic components, characterized in that the reference voltage is the variable of a function $[[f]]$ that has an extreme at the point where the selected nominal value of the reference voltage is situated and in a self-test, the values of the function are determined in succession for the reference voltage and for two further test voltages that differ from the reference voltage by only small positive and negative amounts respectively and these values are compared with one another, and if the values of the function for the test voltages differ from the value of the function for the reference voltage in the same direction a pass signal is generated, or if not, a fail signal is generated.
2. *(Currently amended)* A circuit arrangement for the self-testing of a reference voltage in electronic components, characterized in that it comprises a function generator having a function $[[f]]$ that has an extreme at the point where the selected nominal value of the reference voltage is situated, and the input signals to which function generator are the reference voltage and two further test voltages that differ from the reference voltage by only small positive and negative amounts respectively, and the output signals from which function generator are fed to sample & hold circuits, and in that it comprises two comparator circuits for comparing the values of the function for the reference voltage and for respective test voltages, the outputs of which comparator circuits generate a pass signal if the signs of the signals at them are the same, and a fail signal if they are not.
3. *(New)* A chip comprising a Built-In Self Test (BIST) circuit adapted to identify faults in the chip by comparing, in a self test, a value of a function at a reference voltage to the value of the function at a first test voltage that differs from the reference voltage by a small negative amount and to the value of the function at a second test voltage that differs from the reference voltage by a small positive amount, the BIST circuit further adapted to

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output a pass signal when the function has an extreme at the reference voltage, otherwise to output a fail signal.

4. (New) The chip of claim 3, wherein the BIST circuit includes an internal regulated voltage source.